CLAIMS

1. A fuel delivery unit for use in a fuel tank of a motor vehicle to deliver fuel to an internal combustion engine comprising:

   (a) a surge chamber for holding a quantity of fuel separate from the fuel in the fuel tank;

   (b) a motor driven fuel delivery pump positioned within the surge chamber; and

   (c) a fuel level sensor postioned within the surge chamber to detect the level of fuel therein and to supply a fuel level response signal to control operation of the fuel delivery pump motor.

2. The fuel delivery unit as defined in claim 1, wherein the level sensor includes a reed switch.

3. The fuel delivery unit as defined in claim 1, wherein the fuel level sensor comprises a pipe extending over a subregion of the height of the surge chamber.

4. The fuel delivery unit as defined in claim 3, wherein the pipe of the level sensor is fastened to a cover of the surge chamber and projects downwardly into the surge chamber.

5. The fuel delivery unit as defined in claim 3, wherein the level sensor comprises a float that is guided by the pipe.

6. The fuel delivery unit as defined in claim 5, wherein the reed switch and the float of the level sensor are positioned in the pipe.

7. The fuel delivery unit as defined in claim 3, wherein the pipe of the level sensor has a constricting opening connecting the interior of

the pipe with the fluid in the surge chamber.

8. The fuel delivery unit as defined in claim 1, wherein the level sensor is spaced apart from the delivery pump.

9. The fuel delivery unit as defined in claim 2, wherein the level sensor reed switch is connected directly to the delivery pump.